

Abstract

Disclosed is a machine part (5) with a conical effective surface, which is machined by means of a device comprising a machine bed (1), a longitudinally movable grinding bench (7), and a workpiece spindle head (2) that clamps the machine part (5) by means of clamping jaws (4) via a chuck (3). The conical effective surface of the machine part (5) is ground by means of a first grinding disk (14) in a vertical grinding mode by longitudinally moving the grinding bench (7) in the direction of the longitudinal axis (6). The associated grinding spindle head (10) is provided with a first grinding spindle (12) for the first grinding disk (14) and a second grinding spindle (13) for a second grinding disk (16) that is fixed to a grinding arbor (15). The grinding spindle head (10) is fixed to a grinding spindle carriage (9) so as to be pivotable around a vertical shaft (11), said grinding spindle carriage (9) being movable in the direction of the x-axis via a displacement motor (8). B indicates the swiveling direction of the grinding spindle head (10) while X and Z represent the common axes referred to in CNC technology. The first grinding disk (14) can be driven out of the area of the machine part while the second grinding disk (16) can be made to act upon the machine part (5) in order to internally grind a longitudinal borehole.